

Masonry Designers' Guide

Fifth Edition

Based on

Building Code Requirements for Masonry Structures
(ACI 530-05 / ASCE 5-05 / TMS 402-05)

and

Specifications for Masonry Structures
(ACI 530.1-05 / ASCE 6-05 / TMS 602-05)

with

Illustrated Design Applications
based on the MSJC, and
discussion on using the MSJC with
ASCE 7 and the International Building Code®

Design Philosophy and Methodology

Table 7.2.2 Sets of different sets of load combinations that could be used with the MSJC Code (IBC 2003¹, IBC 2006² and ASCE 7-02³)

Set	Source	Comments
1	allowable-stress load combinations from Code 2.1.2.1	1/3 stress increase is permitted for loading combinations involving wind or earthquake (Code 2.1.2.3).
2	basic allowable-stress load combinations from IBC 2003 ¹ or IBC 2006 ² (Section 1605.3.1)	1/3 stress increase is specifically prohibited (IBC 2003 ¹ or IBC 2006 ² , Section 1605.3.1.1)
3	alternate allowable-stress load combinations from IBC 2003 ¹ or IBC 2006 ² (Section 1605.3.2)	alternative allowable-stress loading combinations were taken from 1997 UBC ³ . 1/3 stress increase is permitted for loading combinations involving wind or earthquake (IBC 2003 ¹ or IBC 2006 ² , Section 1605.3.2)
4	basic allowable-stress load combinations from ASCE 7-02 ⁴ , Section 2.4.1	1/3 stress increase is prohibited (ASCE 7-02 ⁴ , Section 2.4.3)
5	"pseudo-strength" load combinations (strength loading combinations from ASCE 7-93 ⁵ , Section 2.3.1)	"pseudo-strength" design is required only when the legally required building code uses loads from ASCE 7-93 ⁵ (which does not have allowable-stress seismic loads), and the designer chooses to use allowable-stress design. When ASCE 7-93 is no longer referenced as a load document, the need for "pseudo-strength" design will disappear.
6	strength load combinations from Code 3.1.2 (references ASCE 7-02 ⁴)	
7	strength load combinations from IBC 2003 ¹ or IBC 2006 ² , Section 1605.2.1	
¹ Ref. 7.2.2 ² Ref. 7.2.3 ³ Ref. 7.2.5 ⁴ Ref. 7.2.1 ⁵ Ref. 7.2.4		